FYI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

APR 25 2014

Mr. Donald R. Ludwig
265 Trestle Road
Snow Shoe, PA 16874-8903

Dear Mr. Ludwig:

Thank you for your letter to President Barack Obama which was received by the U.S. Environmental Protection Agency (EPA) concerning impacts to your private water supply. The EPA takes very seriously all complaints of drinking water contamination, but the authority granted to EPA by the federal Safe Drinking Water Act is generally limited to public water supplies. Private domestic water supplies are not regulated by the federal government. Under normal circumstances it is the responsibility of the home owner to test his or her own water. Impacts to private water supplies from industrial activity are primarily the jurisdiction of the states. In the Commonwealth of Pennsylvania, the Pennsylvania Department of Environmental Protection (PADEP) has the primary authority under state law for protecting private water supplies.

EPA sets Maximum Contaminant Levels (MCLs) for contaminants in drinking water. MCLs are legally enforceable limits that apply to public water systems nationwide. Primary MCLs are limits on contaminants that cause adverse health effects, while secondary MCLs are non-enforceable guidelines on contaminants to prevent aesthetic problems with water, such as bad taste or discoloration. Although private wells are not subject to EPA MCLs, the MCLs are often used by states as guidelines for assessing private water quality. EPA's current criteria for taking action in instances of private water supply contamination is the "imminent and substantial endangerment" criteria described in section 1431 of the Safe Drinking Water Act. This part of the law states that when a contaminant is present in a public water supply or underground source of drinking water that may present an imminent and substantial endangerment to the health of persons, and the appropriate state and local authorities have not acted to protect the health of such persons, the EPA may take action. Currently, EPA uses risk- based screening tables for various contaminants to determine whether an "imminent and substantial endangerment" exists. These are toxicological tables based on the best available science to protect human health.

EPA has reviewed the PADEP laboratory analysis results of the water sample collected from your well on September 12, 2013. The main concern in your water analysis results is the lead level of 0.0377 mg/L. This exceeds the federal action level for lead (0.015 mg/L). Note, the

action level for lead is a standard for public water systems to take corrosion control measures, and does not necessarily reflect a safe level of lead. Lead is, unfortunately, a very common problem in drinking water and in soils due to the use of lead in metal alloys of plumbing fixtures, decades of air deposition from leaded gasoline, as well as many other industrial uses of lead. When the pH of water is low, some lead may dissolve from soil or from plumbing fixtures into the water. I strongly encourage you to look into point-of-use filters to remove dissolved lead from your water. The Penn State Extension Service, PADEP, and your local health department will have recommendations for various lead-removal options. Lead removal is particularly important for children, because it can disproportionally impact infant and child development. If you have children who live in or regularly visit your home, they should not drink the water.

PADEP's results also indicate your drinking water exceeds the secondary MCLs for iron (0.3 mg/L), manganese (0.05 mg/L), and aluminum (0.05 to 0.2 mg/L). EPA understands that ground water in your area is naturally high in iron and manganese, and that the pH of your ground water is naturally acidic (< 7.0) which may account for the elevated levels of aluminum and lead. However, your results for iron, manganese, and aluminum do not exceed the risk-based screening table values and EPA cannot make a finding of "imminent and substantial endangerment" from ingestion for adults. Take note that the risk-based screening levels are for average adults, and that values are different for children. Specifically, values of manganese above 0.6 to 0.9 mg/L are of concern for children.

Please note the PADEP analytical report you submitted to EPA does not show any organic chemical analysis results. If this analysis has not been done, I encourage you to work with PADEP to determine the presence or absence of any volatile or semi-volatile organic chemicals and benzene, toluene, ethylbenzene, and xylene in your water.

In addition to looking at your water quality results, EPA also reviewed the data on the solid materials collected by PADEP officials from your well pump on September 11, 2013. The results reported by PADEP are not unusual for soil in north-central Pennsylvania, where iron, manganese, and barium are naturally elevated due to local geology. However, given the low pH of your ground water, it is possible some lead and other metals may be leaching into your water, either from soil, or from metals in your well and plumbing fixtures, or both. Keep in mind that Safe Drinking Water Act standards only apply to public water systems. Routine testing and treatment for naturally occurring contaminants are the responsibility of the water well owner.

EPA understands the damage to your home's plumbing system occurred around the same time as the drilling and hydraulic fracturing of a nearby gas production well. However, there does not appear to be any direct chemical evidence in PADEP's analysis of your water and soil to indicate a direct connection to gas production activity. While we cannot rule out an impact, it appears that any direct evidence is absent.

We strongly encourage you to continue to monitor your water regularly, seek point-of-use filters for the lead, and continue to keep the PADEP appraised of any changes to your water

quality. Should you have any questions regarding this letter, please contact Michael Eller of the Ground Water and Enforcement Branch at (215) 814-5427.

Sincerely,

Jon M. Capacasa
Director, Water Protection Division

cc: Mr. David Engle, PADEP
Mr. Scott Perry, PADEP